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**Abstract**

# ENRICHMENT OF HYDROGEN ISOTOPES BY THERMAL DIFFUSION FOR HYDROLOGICAL APPLICATIONS

by

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A two-stage thermal diffusion column system has been developed for tritium enrichment. The critical parameters of the system and the performance characteristics will be described. Enrichment factors of 800 times in equilibrium periods of 30 hours are achieved. The use of such columns in a tritium dating and tracing laboratory will be critically discussed and compared with other techniques.